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SYNOPSIS

OF A FORTHCOMING WORK UPON

CONSUMPTION

AND ITS

NUMEROUS KINDRED MALADIES;

WITH TRACINGS OF THEIR CAUSES,

AND

OF THEIR CURES, UNDER HOMŒOPATHIC TREATMENT.

By ROLLIN R. GREGG, M. D.,

Graduate of the Homœopathic Medical College of Pennsylvania, at Philadelphia; Member of the American Institute of Homœopathy; Fellow of the Hahnemannian Medical Institute of Philadelphia; Member of the Homœopathic Medical Society of the State of New York; and Member of the Erie County, N. Y., Homœopathic Medical Society.

BUFFALO:
PRINTING HOUSE OF MATTHEWS & WARREN,
Office of the Commercial Advertiser.
1865.

Entered according to Act of Congress, in the year 1865,

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INTRODUCTORY NOTE

TO THE

MEDICAL PROFESSION.

The want of a system of pathology, based upon an absolute knowledge of the actual causes of the various diseased conditions to which humanity is subject, and, therefore, the better adapted to the therapeutics of Homœopathy, must have long been felt by all classes of practitioners of the Homœopathic school.

In vain do we search for anything satisfactory, under this head, in the pathological doctrines and teachings of the old or Allopathic school, for next to nothing is found there, about causes of disease, but assumptions and conclusions that are often so vague, irrational and contradictory, as to stamp them upon their face as abounding in error, excepting the bare fact, settled centuries since, that some diseases are hereditary, others contagious, some infectious, others miasmatic, and still others epidemic, etc. Neither do we find that much progress has yet been made in this direction, in our own school. No advance, in fact, except what little has resulted from Hahnemann's discovery of the three morbific poisons, or taints, namely, psora, syphilis and sycosis, as the foundation of much chronic and some acute disease. Yet these are but very imperfectly understood, even now, after so much discussion has

been had concerning them; for no one appears to have hitherto ascertained upon what class of tissues these taints seat, internally, or how they act thereon to produce the multitude and variety of diseases and sufferings which they do.

It was this pressing want, which I constantly experienced, in my daily professional walk, that first led me into a series of investigations, in the direction in question, though without originally designing to pursue these beyond the bounds assigned by my individual practice. But, the research once begun, continued each day to open a broader and more extended field, until, even before I was fully aware of it, I had assembled and digested a mass of facts, and results, so important and far reaching, that they could no longer be neglected, in themselves, or separated from the still higher results to which it was already apparent these unerringly pointed. It was not until then that I first formed the purpose of extending my efforts beyond my original limit, and of reducing to a system that which I had, at first, deemed only fragmentary, and detached. It was not without some surprise, therefore, that I saw the facts I had accumulated, and the necessary deductions which naturally flowed from these, arrange and classify themselves into a *system*, for one fruitful class of diseases, namely, the tuberculous, and its numerous kindred maladies, whose foundation rests upon Nature, herself.

Thus urged forward by the novelty of my discoveries, so entirely aside of anything contained in existing medical libraries, I resolved to embody the results of my labors in a volume for the profession, to be entitled, "*Consumption, and its numerous kindred maladies, shown to result from a loss of albumen by the mucous membranes,*

and their cures traced and defined through Homœopathic treatment," which volume will cover no ground hitherto occupied by the medical publications of any school. That work is now *mainly* ready for the press; but still there is much yet to be done to it; and as I can only give to that duty the time I can command, in the midst of a daily active practice of my profession, it may be a considerable time before I shall have the manuscript entirely arranged and completed.

In the meantime I submit to the profession, the following synopsis of some of the most prominent features of the book. By this the professional reader will see, at least in part, what is claimed as new in medical discoveries, in the direction in question; and if any shall object that *proofs* do not accompany the assertions, here contained, all such are respectfully assured that, in the work itself, such proofs shall be furnished in most ample detail.

It may be added that the book was copyrighted over one year since, in the expectation of its going to press ere this; but owing to the unforeseen delays above referred to, it still lacks something of completion.

R. R. GREGG, M. D.

BUFFALO, October, 1865.

SYNOPSIS.

In the summer of 1854, while treating a case of phthisis pulmonalis, in the incipient stage, I had my attention attracted by one symptom, or feature, of it, which interested me deeply, and which has proved to be the foundation of two series of what I regard as important discoveries in pathological science, that I have since made. This symptom, or feature, of the case, was as follows: The patient, a lady of 33 years, who had, for the most part, a dry hacking cough, with chronic sore throat and irritability of the lungs, would occasionally have severe paroxysms of coughing, and expectorate thereby, a transparent gelatinous mass, sometimes as large as a medium sized marble, though irregular in form, and of sufficient consistence to maintain its shape wholly, or in part, for some little time after it was expectorated, and would then flatten down upon the surface on which it was placed. In case of failing to raise this, the patient stated that she would have a continued sensation "here," placing her hand over the bifurcation of the trachea, as though there was something lodged there that she wished to detach and eject. This would excite considerable more cough than it was common for her to have, when, finally, though sometimes not until after several days, she would detach and expectorate a mass of the size of a small pea, or less,

of cheesy-looking substance, bearing every appearance of crude tubercle, and this would terminate the increased irritation that its presence there created. The expectoration of the transparent mass, or failing in this, the increased irritation in the trachea, and final ejection of the substance resembling crude tubercle, which always terminated the additional cough, constituted a marked feature of her case until many of the other symptoms had nearly disappeared, in the progress of her cure.

Reasoning upon these facts, in the connection here presented, I naturally assumed a relation between the transparent masses named, and the more hardened ejected pellets. I concluded that the former, the transparent masses, must be the blastema of tubercle, within and from which the tuberculous corpuscles were organized, and that the latter or hardened pellets, were aggregations of tuberculous corpuscles, comprising the residue of the former, after the supposed organic change, and the removal, by evaporation or absorption, one or both — lying as the masses did in contact with the inner and free surface of the trachea — of the water which constituted so large a portion of the entire bulk of the original mass.

A starting point thus once obtained, I pursued the investigation carefully, through the succeeding five years, in every case of phthisis proper, and catarrh so-called, that I came in contact with, until I met with so many similar cases which furnished repetitions and confirmations of the above order of facts, that I embodied the conclusions at which I had then arrived, namely, that all tuberculous deposits were the result of a perverted secretion of the mucous membranes, arising in consequence of an irritation and abrasion of their free surfaces, in a pamphlet entitled, "Phthisis Pulmonalis, or Consumption shown to be the

result of a perverted secretion of the mucous membranes, and its cure established by Homœopathic remedies, under the law of 'Similia Similibus Curanter.'" This pamphlet was published in 1859, and with it the profession have become somewhat familiar. It embraced much more, it is true, than above indicated; as for instance, the announcement of my discovery, that boils and carbuncles are the result of tuberculous deposits in the cellular tissue of the muscular system; and the further announcement of my discovery of the law of *metastasis*, besides other original matter which need not be mentioned here; in short, it compassed my first series of discoveries in the great field of tuberculous diseases.

After the publication of the pamphlet, I pursued a systematic course of observations upon all the other mucous membranes, no less than upon that of the air passages, to ascertain if they all alike furnished the perverted secretion in question. True, it was implied in that treatise, that they did, but this position was taken, more from a knowledge that the anatomical structure of all mucous membranes was alike, that their physiological functions were similar, and that like action, upon like animal tissues, must result similarly, and also from a few cases actually seen, than it was from any extended series of observations I had then made. Now, however, I have had such observations, and they have fully confirmed what I then partially assumed, and have furnished cases, by which the fact has been established by the most positive proof, that *all* the mucous membranes, except that of the liver — and this by analogy — pour out from their free surfaces, when these are abraded, the transparent gelatinous mass, or what I then termed primitive tuberculous matter. And furthermore, that where this was thrown off in any con-

siderable quantity by *any* of the mucous membranes, there were always more or less marked symptoms of tuberculosis, or some one of its kindred maladies, attending such discharge.

The next points to settle, were the chemical and physiological characters of this perverted secretion. Its pathological nature I thought I had already settled, as above shown. Well, in the course of a year or more spent upon this subject, in research and comparison, I settled the fact conclusively in my own mind, in the year 1861, that such secretion, as well as all abnormal secretions of mucus, or other outpourings from *any* of the mucous membranes, which result from an irritation or abrasion of the free surfaces thereof, are *always* either pure ALBUMEN, or *albuminous* in character; that the albumen so discharged, comes directly from that which should be held in the fluid percolating the intersticies of the tissues, composing those membranes; and that its ultimate, and *only* source, is in the blood.

The point being settled, then, that the perverted secretion, which I made the basis of tubercle, in the pamphlet, was none other than albumen, or, at least, albuminous in character, it was clear, of course, that this secretion was not, itself, primitive tubercle, or nascent tuberculous matter, nor, indeed, the pabulum of tubercle, in any proper sense of the term, as I had claimed. Since, from all that we now know, it would be impossible for corpuscular bodies, or other organic structures, to be developed within, and from, albumen, lying upon the free surface of any membrane, as tissues have been supposed to be developed, each out of its own peculiar blastema. Though if the transparent, gelatinous outpourings in question had been the blastema of tubercle, as I then supposed, it was clear

that tuberculous corpuscles would organize in and from them; and herein is exposed an error I committed, in assuming so direct a connection between the two, and which, in its appropriate place, I shall fully correct. But, that such transparent secretion, or as I now know more definitely, the loss of albumen, was in some way the cause of tuberculous diseases, was confirmed to me in every case I met, and by subsequent research, I ascertained how it acted as such cause, as we shall soon see.

The manner in which this loss of albumen is sustained, I found to be as follows: In the first place, the mucous membranes — for they all act alike in this respect — *always* secrete more or less albumen, along with the mucus secretions, when they are under simple irritation or inflammation, and when either or both of these conditions have progressed to that point, whence results an abrasion of their free surfaces, or in other words, when these surfaces have been stripped of their epithelial covering, the interstices in the membrane are uncapped, or opened, and the albumen, that naturally exists therein, flows out, and is carried away, incorporated or not, as the case may be, with other unnatural, or with the natural discharges, from the organ in which it takes place. The continued presence of successive portions of albumen, in those interstitial spaces being necessarily required there for nutritious purposes, more of it is poured out into them from the blood, and mostly wasted — nutrition would undoubtedly seize upon some of it as it was passing through — in like manner to the preceding, and this succeeded by more, which is lost, and so on, until the abrasion is healed, or death terminates the case.

Here, then, it will be seen, we have a rational basis for the pathology of Bright's disease of the kidneys, always

hitherto in doubt. It explains, clearly, the manner in which albumen escapes from the blood through the mucous membrane, into the uriniferous tubules, in this disease, where it is dissolved and washed away in the urine, when we have what is called albuminuria. And as all the other mucous membranes lose albumen in a similar manner, that is, as a result of irritation, inflammation and abrasion — either and all — of their free surfaces, all such diseases of these, are more or less kindred to Bright's disease of the kidneys. For instance, phthisis pulmonalis, in all its catarrhal symptoms, from the commencement to the close of the disease, is kindred to Bright's disease, in this respect, namely, that the mucous lining of the bronchial tubes, in consequence of the irritation, inflammation, or abrasion of its free surface — these conditions of that membrane always existing in all stages of phthisis — loses or wastes albumen from the blood, the same that the similar lining of the uriniferous tubules does in albuminuria. That is, the albumen, in such cases, is *secreted* by the irritated or inflamed portions of the membrane, and *leaked* through those parts of it abraded of its epithelium, into the bronchial tubes, when it is coughed up, mingled more or less with other expectorated matters, and there found by its chemical tests, and always in abundance, in viscid, thick and adhesive expectoration. And I repeat, *the loss of albumen goes on in phthisis, in this way, in greater or less proportion, from the very first catarrhal discharge from the nostrils, or any of the other passages lined with mucous membrane, which show chronic disturbance in the incipient stage of the malady, all the way through the different stages to the close of life,* only the greater the amount of mucus discharge from the lungs, and the greater the quantity of other mucus discharges

in any stage, the greater will be the loss of albumen. Finally, all the other chronic, and all the acute diseases, which have their primary seat upon any of the mucous membranes, or irritate or abrade these in their course, waste albumen from the blood, and in this respect, may be said to be kindred to albuminuria.

The fact once established in my mind, then, that the transparent gelatinous secretion, spoken of in my pamphlet, and to which reference is here made, was albuminous in character, and that all the albumen lost through the mucous membranes, in the ways above described, diminished the amount of this constituent of the blood, by so much, marked the commencement of a second series of discoveries that I have made, which is far more important than the first, and opened a field for pathological research, that bids fair to be at least equal, if not greatly superior, to any other that has ever hitherto engaged the attention of the profession. It was clear to me that that proportion among the constituents of the blood, which Nature had caused to be produced, and hence necessarily required in order to make it a nutritious fluid, was destroyed by such loss, and that the remaining constituents, namely, water, blood-corpuscles, hæmatin, fibrin, fatty matters, salts, and extractive matters, would each be left relatively in excess, in the circulation, in the ratio they must bear to each other, and to albumen, in perfect blood. To make this point more clear, I here insert the following table of the proportions of the principal constituents of the blood, in 1000 parts, taken from the most accredited authorities:

Albumen,	70.00
Water,	403.00
Blood-corpuscles,	512.00
Fibrin,	2.20
Fatty matters,	1.30
Salts,	6.03
Extractive matters,	5.47—1000.00

The proportion of the blood-corpuscles, here given, is not that of their dried residue, of course, as they are generally rendered in the books, but represents the gross amount of them in the circulation, in their *natural* state, holding within their cell walls the requisite quantity of water to enable them to suitably perform their functions; and in them, it must not be forgotten, is included all the hæmatin, or coloring matter of the blood, which is 7.5 parts in 1000 parts of blood.

According to this table, then, if one ounce of albumen is lost from the blood, we have above 13 ounces of the other constituents, collectively, left in a relative excess in the circulation; or in other words, there would be wrought, in this way, a complete destruction of over 14 ounces of blood — including the ounce of albumen — for any and all purposes of normal nutrition; and yet this is a view of this subject, which appears never before to have been taken. To go into details we find the following: The loss of one ounce of albumen, would leave a relative excess in the circulation of nearly 6 ounces of the water of the serum, over 7 ounces of blood-corpuscles, 15 grains of fibrin, nearly 9 grains of fatty matters, over 41 grains of salts, and above 37 grains of extractive matters.

That none of this excess of any of these constituents, can be used in normal nutrition, and hence that all of such excess is now foreign matter, in the blood, was equally as clear to me as that the loss of any portion of any one of them, would destroy that proportion among them all, which Nature, with so much care, had established — though that some of them are employed in abnormal nutrition I soon learned. Then if their excess cannot be used, it must be cast out of the circulation, for with a continual daily supply of all of them, albumen included,

to the blood, by digestion, in the proper relative proportion of each, with a portion of the latter being daily lost, and none of the excess of the remaining ones consumed in nutrition, it can be plainly seen that, if not expelled, so great an accumulation of these would soon take place, that the whole circulatory system would be distended to the extent of rupture, and death speedily ensue. Instead of matters proceeding to this extremity, however, I shall be able to show that such excess, is generally expelled from the blood vessels, by secretion, etc., through every avenue of escape which Nature can command, thus avoiding what would otherwise necessarily result in a much earlier fatal termination.

The manner in which the surplus portions of those constituents named as left in excess, is deposited within, or ejected from the system, and the varied and remarkable symptoms and diseases of which they are the cause, when so deposited, or while being expelled, I here give in brief, to indicate something of the character of my second series of discoveries, as these, together with their proofs, will be exhibited in my forthcoming work. For instance, I feel competent to demonstrate that, the "night-sweats" of consumption and other kindred diseases, and the dropsical effusions of these, when they occur, and also of Bright's disease of the kidneys, are all the result of the excess of water, left in the blood by loss of albumen, which water Nature throws off in these several ways, to get it out of the circulation; that all tuberculous corpuscles, so-called, are nothing more nor less than the excess of blood-corpuscles, left by loss of albumen, these being decolorized, by a special process, and through this and other agencies changed into tuberculous corpuscles, as we shall soon see; that the petechial or purpural spots of malignant diseases

and that ephelides or freckles, and other discolorations of the cutaneous surface, arising from diseased action, come from the hæmatin, which is released from the surplus corpuscles, and then deposited in the skin; that fibrous tumors, abnormal adhesions, etc., arise from an excess of fibrin in the blood; that fatty deposits, fatty tumors, and the like, come from an excess of fatty matters, in consequence of a loss of albumen; that calculus concretions or deposits, whether about the joints, or in the cavities or passages of internal organs, and also lithiasis or gravel, come from an excess of the salts left in the blood by the same cause; and, lastly, that many morbid growths and tumors, besides fibrous and fatty tumors, may arise from the matter which nourishes them being left in excess, in the blood, by a loss of albumen.

Or to descend more into detail, we find the following, taking the constituents of the blood, in the order just named in the table, passing over albumen, of course, as the one constituent which is lost. The *water* of the serum, then, first presents for consideration. The loss of one ounce of albumen, leaves, as we have just seen, nearly 6 ounces of water in excess, which reduces the specific gravity of the serum, makes the blood more watery as it is called, that is, leaves a relative excess of water in the circulation in comparison with the coagulable matter remaining therein, after the loss of albumen has been sustained. The reduction of the specific gravity of the serum, necessarily excites the law of *endosmosis* to greater activity than is natural, throughout the whole capillary system, by which the excess of water, or at least, a greater portion than in health, of the now less dense serum, is, generally, first expelled through the walls of the superficial capillaries into the interstitial spaces of tissues out-

side of those vessels, and from these spaces, through the same, or other agencies, this water is next removed, in the majority of such cases, through external or internal surfaces, to get rid of it from among the living tissues, or from the system entire, as the case may be. The results of such expulsion are various. In the first instance, the excess of water is thrown off by increased secretions of urine, causing what is sometimes called diabetes insipidus, or through the skin in increased daily perspiration; or through both the skin and the kidneys, as the forces impelling it may direct. When the system fails to accomplish the expulsion of this excess of water, by these means, the patient next suffers from "night-sweats" — which are thus shown to be beneficial, under the circumstances, rather than injurious—and sometimes from watery diarrhœa. And, lastly, when Nature finally fails in all these efforts at self-preservation, we then find this water accumulating in the cellular tissue of the muscular system, there causing anasarca or general dropsy, or it is poured out into some of the serous cavities, causing ascites, hydrothorax, hydropericardium, or hydrocephalus, according to the cavity into which it is excreted. Of course there is not, and cannot be, an entire uniformity in these several results, in all persons' systems, suffering from a loss of albumen, any more than there is an identity of all the several cases of any other class of diseases, in all individuals. Again, according to my observations, it is only in a small minority of the cases, that *all* the surplus water is expelled from the vessels, as fast as it is brought into excess, for in the great majority of such cases, a small portion of it, at least, seems to be retained, thus causing the blood to be too watery, during all the time the waste of albumen is going on. That portion of the excess of water retained, is, generally,

more marked in Bright's disease, than in any other derangement where albumen is lost, for the reason that in this malady the kidneys are so much diseased as to interfere with, or so far interrupt the excretion of water by them, that not near as much of this is thrown off by urination as naturally should be, which of itself would be the means of too much water being retained in the blood, even if there was no discharge of albumen. But when we come to add to this, the relative excess of water left by such discharge, none of which is or can be ejected through the kidneys, in many such cases, we have much more serious results than could otherwise occur, and among these are the early dropsical effusions which are so common in albuminuria and so alarming to both the patient and physician, and which would not arise so soon, but for this fact.

Next in order occur the *blood-corpuscles*. These, like all other cells, endowed with vital activity, have a definite period of existence; therefore new ones are constantly being produced, within the system, to supply the place of those that are as constantly undergoing natural decay. The language of Virchow is explicit in regard to these facts. He says: "But we are also all agreed upon this point, that the blood is one of those changeable constituents of the body, whose cellular elements possess no durability, and with regard to which everybody assumes that they perish, and are replaced by new ones, which in their turn are doomed to annihilation." Of course, production and decay of the blood-corpuscles must keep exact pace with each other, in healthy blood, to ensure the continued presence, at all times, of the proper proportion of corpuscles, or cells, to the other constituents. On the contrary, in diseased action, the loss of one ounce of albumen, as I have before stated, would leave above 7 ounces of

blood-corpuscles in excess in the blood vessels; and I propose to demonstrate, in my forthcoming publication, that a great portion of this excess of blood-corpuscles, becomes tuberculous corpuscles, and that tuberculous corpuscles, proper, have *no other origin but this;* while those of the excess of blood-corpuscles, not changed to tuberculous corpuscles, are entirely broken down and cast out of the system.

True, the blood-corpuscles, or all but a *very* small portion of them, are red, while the tuberculous corpuscles are yellowish white—facts of which no one is more thoroughly aware than myself, as the labor and research which the discovery of the change of the former into the latter cost me fully demonstrates.

That I have not failed to give this branch of my subject due consideration, the few following facts, furnished here, from the great number which I have accumulated for my work, will indicate. While the specific gravity of the serum is reduced by the loss therefrom of albumen, and this excites to increased activity the law of endosmosis upon the capillaries, directing the greater part of the surplus water *outwardly*, through the walls of these, with the results I have named, when speaking of the disposal of the excess of water, this law, at the same time, and from the same cause, is *necessarily* excited to action upon the corpuscles, directing a portion of the excess of water *inwardly*, through the enveloping membrane of these little bodies — their contents being essentially of the same specific gravity as that of the serum in the natural state of each; therefore when the specific gravity of the latter is reduced, and while the contents of the former remain nearer the natural density, a portion of the excess of water, under the direction of endosmosis, *must* pass through

the membrane constituting the cell wall, from the less dense serum into the more dense contents of the corpuscles, and in doing so, produces, in them, certain characteristic and specific results. These results are, in short, as follows: In the first instance, the corpuscles are distended by the accumulation of water within them, by which their natural disk shape is destroyed, and they are expanded to the globular form, and if this is carried on rapidly and to an extreme, as it sometimes is, in acute diseases, where albumen is rapidly abstracted from the blood, by diseased mucous membranes, as, for instance, in some cases of scarlet-fever, small-pox, measles, diphtheria, typhoid fever, etc., a great many, perhaps all, of the excess of corpuscles, are entirely destroyed, the cell wall being so distended as to be ruptured, and let out their contents, globulin and hæmatin, into the serum, this being the cause of that condition of the blood, in which it is said to be in a dissolved state. If, on the other hand, albumen is lost more slowly through the mucous surfaces, as it generally is in phthisis and other tuberculous diseases, most of those corpuscles which are affected in consequence, are less extremely distended, therefore they are not ruptured, but have their coloring matter washed, or dissolved out of them into the serum, in the process of distention. This leaves them, in external appearance, at least, similar to the natural colorless corpuscles of the blood; that is, the globulin is left within the cell membrane of the corpuscles, and this, in its pure state, after the hæmatin is taken out, being yellowish white, when concentrated — the same color as tuberculous corpuscles — or nearly transparent, when partially dissolved, as it is when the corpuscles are distended with water to the globular form, we have these presenting every appearance, externally, of the natural, colorless

corpuscles. It is, evidently, the middle aged and older corpuscles, and those naturally the weakest constructed, that are most affected in the above-named process, the two latter, that is the weakest and the older ones, being, probably, mostly if not wholly broken down and dissolved in the operation, thus enabling the system to cast them out of the circulation by excretion; while the middle aged ones, being much more difficult to destroy, are so changed that they become tuberculous corpuscles, and the younger cells resist the effects of a diluted serum, and are kept in greater or less perfection, to perform those functions for which the red corpuscles were created, and without which death must be immediate.

As those distended and decolorized blood-corpuscles that are destined to become tuberculous corpuscles are still retained as organized bodies or cells *within* the vessels — there being no apertures in the coats of either the arteries, capillaries, or veins through which they can be ejected; and as their numbers are constantly increasing, in all cases of tuberculous diseases, from the continued loss of albumen leaving in excess, successive portions of the corpuscles, which must undergo the same changes that the preceding had undergone; and as all of these must be utterly incapable, in their changed state, of properly performing any of those functions which the red corpuscles were created to perform, it is evident that some method or methods must soon be adopted, by which the general circulation of these now useless and foreign bodies, may be intercepted. If not, their unceasing accumulation would shortly bring them into such excess, that the water of the serum could not float them, so readily is the greater portion of the excess of the latter expelled from the vascular system by endosmosis.

The disposition which is made of the changed corpuscles I found to be as follows: They are deposited *within* the capillaries, with such exceptions as I shall subsequently note, and then and there undergo the further changes necessary to make of them what we call tuberculous corpuscles, as will soon be seen. They *commence* their deposit, evidently, in one, or at most a few neighboring capillaries, at some point in an organ or tissue; and these few capillaries are soon so filled as to prevent all further circulation, at least of corpuscles, through them. Then more of the surplus corpuscles seeking deposit, are crowded into those capillaries, already obstructed, expanding the coats of these minute vessels, until a kind of protuberant sac is made of each vessel so dilated. The result of this dilatation, is, that the adjacent capillaries are pressed upon, and circulation through these, also, more or less impeded, and they are then filled, in like manner to the above, and so the process extends outwardly, from capillary to capillary, until such size of the accumulating mass is attained, as circumstances, or the forces controling it, shall permit or direct. Again, this process may be going on at many different points, in any one organ, or in different organs, at the same time.

One of the forces which starts the deposit, or under the operation of which the changed corpuscles are at first intercepted in their circulation, is undoubtedly this: In undergoing the other changes I have pointed out, the red corpuscles also acquire a marked adhesive or sticky property, which they do not possess in their natural state, and in consequence of this, they adhere quite tenaciously to the inner walls of the vessels, and to each other, when brought in contact. When passing through the capillaries, therefore, a favorable opportunity is afforded them

to secure a lodgment, many, if not most of them, being there brought into direct contact with the inner walls thereof, and some of them held there long enough to afford a nucleus for others to adhere to, and thus block up a capillary, and ensure a permanent deposit therein. When once begun, the trouble would naturally extend to adjacent capillaries in the manner I have already described. Whether other agencies assist in procuring these obstructions, it may not be easy to determine; but such determination is the less important, here, since this one seems alone sufficient to produce all the derangement in question.

Whenever the decolorized corpuscles, or a few of them, secure a permanent lodgment within a capillary, and more of the same are crowded into it, dilating it into the kind of sac named, then another and new order of changes in such corpuscles sets in. They are deposited, it must be borne in mind, in such a manner that they are surrounded by living tissues, and these tissues hold in their interstitial spaces, fluid, or semi-fluid matter of greater specific gravity, than the water which the corpuscles have brought in them, from the serum, therefore the law of endosmosis is now excited to action upon the corpuscles in the opposite direction to that in which it had been acting upon them up to this time — until now the current had been inward, only, through the cell walls, changing the form of the corpuscles by distention — compelling them to give up their surplus water, when they shrink in consequence, and from external pressure, or innate forces, or both, become angular, jagged, elongated, or otherwise distorted in shape, and are then what are so well known as tuberculous corpuscles; though these were never before traced to such an origin, nor indeed were they ever before clearly traced to any definite origin, notwithstanding the many

speculations indulged in, through many years, in regard to them.

The proofs which I have accumulated, to substantiate all that is here claimed in regard to the two sets of corpuscles, that they are both one in fact, and that their seat of deposit is *in* the capillaries with certain exceptions, will, I think, be found sufficient, when presented, to convince every candid reader. And then, also, will appear evidence of the fact, that the stoppage of circulation through the capillaries within which deposits take place cuts off their nutrition, and in consequence of this and absorption, the walls of these vessels finally disappear, leaving an aggregation of corpuscles in mass, undivided in any part by living tissue, and in which "cheesy metamorphosis" is then said to have taken place.

If tuberculous corpuscles, then, have the origin I have here assigned them, they could, when circumstances favored, as readily be deposited in the muscles, causing boils and carbuncles, as in the glands causing scrofulous ulcerations, or in the lungs causing phthisis. In short, they might be deposited in any organ or tissue, where capillaries exist, and there produce symptoms characteristic of that organ or tissue, when it receives such foreign matter as a deposit, within its living substance.

The exceptions to the deposit of the changed blood-corpuscles, *in* the capillaries, are as follows: Often, if not always, when the free surface of any of the mucous membranes is abraded, many of the superficial capillaries of the injured part, are broken, and more or less in number, of the surplus corpuscles, are expelled through the ruptured vessels; and when soon discharged from the system, have undoubtedly been mistaken for so-called pus corpuscles. But if the abraded surface is firmly covered

with the tenacious or albuminous secretion, as is often the case, more especially, perhaps, with the smaller bronchial tubes, then the ejected corpuscles accumulate beneath this covering, and are there held in contact with living tissue, when endosmosis is set at work upon them, removing their surplus water, and they then shrink and become tuberculous corpuscles, the same as though deposited within the unbroken capillaries. When, in the air-passages, the accumulating mass becomes sufficient in size, to enable it, under the expelling force of the cough, to break through the tenacious covering, or when the latter is removed by absorption, then the former will be expectorated as a mass of "cheesy" tubercle. This was what deceived me into the belief, that tubercles were the residuum of the masses of transparent gelatinous outpourings of the abraded mucous surfaces, as I described them in my pamphlet in 1859 — taking the case given in the early part of this synopsis, and others which seemed to corroborate that, as the basis of my conclusion. The error can be clearly seen now, however, and why it was committed. When the patient failed to expectorate the transparent mass, as already detailed, it was retained in contact with, and covering the abraded surface, through which it had been poured, and there held the expelled decolorized corpuscles, long enough for them to give up their surplus water, when they would be expectorated in a mass, the size of a small pea, or less, in the manner already stated.

This, also, explains the observation of Dr. Carswell, which I quoted from Watson in my pamphlet, to sustain the views I then advanced upon this point, and which, according to the latter, is as follows:

"The mucous membrane of the air tubes separates from

the blood, not only the matter of tubercle, but also its own proper secretions; and that, frequently when the two have been poured out *together*, a dull yellow opaque point of tubercular matter becomes *set*, as it were, in a portion of gray, semi-transparent, and sometimes inspissated mucus."

The dull yellow point of tubercular matter, observed by Dr. Carswell, was, undoubtedly, the changed blood-corpuscles forced out of the circulation, through the broken vessels, beneath, and perhaps into, the semi-transparent mass of mucus, and there held until they gave up their surplus water and became what we call tuberculous matter.

There are exceptions, too, to the general fact, that a great portion of the excess of blood-corpuscles, arising from loss of albumen, in chronic cases, is changed into tuberculous corpuscles. Like the diversity in the disposal of the excess of water, hitherto mentioned, there will not be uniformity, in all respects, in the different systems, in disposing of the surplus corpuscles; but such diversity will here arise as temperament, age, condition, habits, circumstances, etc., may permit or direct, in this, as in all other diseased action. In most of the cases of Bright's disease, for instance, the interference with the expulsion of the excess of water through the kidneys, as I have already shown, leaves the blood so watery that, by endosmosis, the middle aged as well as the older blood cells, are often so distended as to be ruptured and entirely broken down, thus avoiding their change into tuberculous corpuscles; though the existence of tubercle and tuberculous diseases, are by no means unknown as associated disorders of albuminuria.

The *hæmatin*, or coloring matter, of the red corpuscles,

which is washed out of these into the serum, in the manner shown above, or released by their rupture as the case may be, I found to be disposed of in the following manner: In most acute and many chronic diseases, it is expelled through the kidneys, in the urine, causing the high color of this, and the "brick dust" sediment; and also, by the bowels, causing dark-colored fæces; while in the most severe cases of acute diseases, such as malignant typhus, small-pox, scarlatina, measles, dysentery, etc. — in all which albumen is lost freely through some of the mucous membranes — more or less of the released hæmatin is deposited in or just beneath the skin, causing petechiæ, or the purpural spots, which are somewhat common in the worst forms of those maladies. The same thing occurs sometimes in the advanced stages, or worst cases, of malignant chronic diseases. Moreover, I am convinced that it is a deposit of some portion of the excess of hæmatin in spots, just beneath the epidermis, that causes ephelides or freckles; and, finally, that the coloring matter in all cases of melanosis and melanotic tumors, has the same origin.

The excess of *fibrin*, which would be 15 grains for every ounce of albumen lost, is disposod of as follows: In Bright's disease some portion of it is often thrown out into the uriniferous tubules, and there coagulates and forms casts of the tubules, and then is discharged, in this form, in the urine. In bronchitis, which wastes albumen from the blood, through the mucous membrane of the bronchia, the excess of fibrin, or some portion of it, may be, and sometimes is, expelled from the vessels into the same tubes, and there coagulates and forms solid or tubular casts of them, with numerous prolongations corresponding with different tubes, and, therefore, of arborescent

form, and in this condition, sometimes expectorated. The membranes of croup and diptheria are from the same cause, that is, excess of fibrin in the blood in these diseases. Again, in other diseases, the excess of this constituent, or a part of it, is cast out of the circulation, into the serous membranes, thickening these, or upon their free surfaces, where it forms false membranes, or bands of adhesion between their opposing surfaces, as in plurisy, peritonitis, etc. In deposits of tubercle, some part of the excess of fibrin is always poured out into the tissues around the tuberculous matter, and condenses to form the impervious wall of the abscess, after suppuration has taken place — a remarkable provision to shield the surrounding and otherwise unprotected tissues, from the further ravages of ulceration. Fibrous tumors, many times, if not always, have their origin in an excess of fibrin. And, finally, if the excess of this constituent, is not expelled in some way, from the blood, its accumulation soon leads to its coagulating into clots in the vessels, forming what are called thrombi, which, when they reach sufficient size, may block up some of the larger or largest arteries and cause instant death. Sometimes these clots form on some of the valves of the heart, from which they are removed by the heart's action, and then pass along with the current of blood until arrested by some artery which is not large enough to pass them further, when they will cause more or less serious trouble, according to the size of the artery thus obstructed.

My work will also conclusively show, I think, that there is a very grave error involved in what we have been so long taught by all pathologists, namely, that inflammation increases the quantity of fibrin in the blood, that is, increases its *production*, and thereby its quantity. Does it not appear upon its face, like an absurdity, to say

that the production of any of the *natural* constituents of the blood can be increased by diseased, and, therefore, *unnatural* action? Such a result, I shall endeavor to demonstrate, is impossible, in the nature of things; and to sustain this, will offer proof that the increase of fibrin, in inflammation, is solely due to a loss of albumen actually going on at the time such increase is manifest.

The excess of *fatty matters*, which would be nearly 9 grains, for every ounce of albumen lost, is either cast out of the system entirely, in some of the excretions, or out of the circulation into some of the living tissues, and remaining there as a more or less permanent deposit, causes the following diseased conditions. Under Nature's efforts to cast the excess of this constituent entirely from the system, it is sometimes expelled through the skin, causing oily perspiration, sometimes through the kidneys — and this quite commonly in Bright's disease — causing an oily film upon the urine, sometimes through the bowels in the excrements, this being quite common in both Bright's disease and phthisis pulmonalis, and sometimes it is thrown off, or a portion of it at least, in the expectoration, in cases of phthisis, bronchitis, etc. When deposited in living tissues, as it frequently is, in the kidneys, in albuminuria, and in the liver, both in phthisis and albuminuria, we have what has been so long taught as a result of "fatty degeneration," but which is nothing more nor less than a *deposit* of the excess of fat from the blood, into those organs, to get it out of the circulation. And I think I can prove, on principles of sound philosophy, that there is no such thing as fatty metamorphosis of these or any other organs, in the sense that we are taught, but that the so-called "fatty degeneration" of tissues, is the result, always, of deposits of an excess of fatty matters from the

blood. Unquestionably fatty tumors, also, depend upon the same fact for their cause.

In reference to the excess of the *salts* of the blood, which would be over 41 grains, for the loss of each ounce of albumen, it will be my purpose to establish the following facts, namely, that the "gravel," so-called, or lithiasis, and the entire list of calculous diseases, or concretions, whether formed in or about the joints or tendons, or in the bladder, the kidneys, the prostate glands, the intestines, the liver, the lungs, the heart and arteries, or other parts or organs, are dependent upon an excess of salts in the blood for their existence, except so far as they are made up of uric acid — this being in excess, too, in the blood — and that such excess of both salts and uric acid, is owing to a loss of albumen in many, if not all such cases.

Lastly, the excess of the *extractive matters* left in the blood, would be above 37 grains, for each ounce of albumen wasted. But so little is yet known of these matters, that it will be impossible for me, at present, to show the exact disturbances that they cause, when retained in the blood in excess, or when deposited within any of the living tissues; though it is clear that such retention or deposit would be entirely unnatural, therefore the cause of some characteristic disturbance or diseases, which the future must unfold.

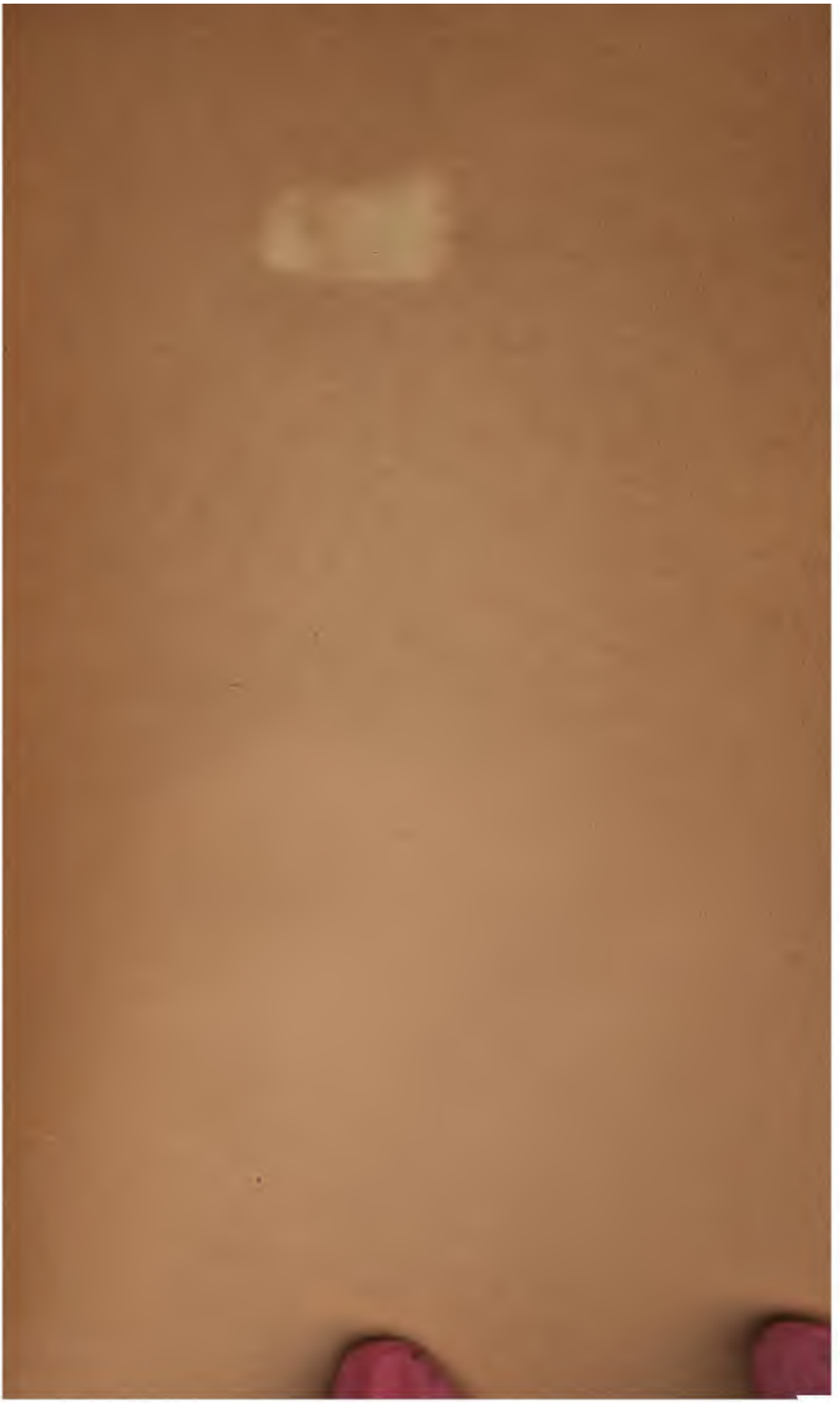
Whether there are vital compounds, also, which, from their excess in the blood, seem to contribute to hypernutrition of natural tissues, or to the production of tumors and other morbid growths, besides those of a fibrous or fatty character, necessarily forms the basis of investigations too prolix for insertion here.

In general, what has no more than been barely touched

upon, in the preceding pages, will be found fully elucidated in the forthcoming work; and the evidences will be there, pointing out the causes of the chronic irritation, or inflammation and abrasion of the mucous surfaces, resulting in a waste of albumen; prominent agents in which devastation will be proven to be psora and syphilis, which, when they are transferred internally, whether in consequence of being driven in by bad treatment, or otherwise, *always* seat primarily upon the free surface of some one or more of the mucous membranes, and from their action there, spread desolation on every hand. It seems quite unnecessary here, to say more in regard to the *cure* of all the multitudinous diseased conditions, which owe their origin to the loss of albumen from the blood, than that any and all of these, like every other diseased condition, are curable, *only*, by the removal of their CAUSE, namely, through the restoration of the mucous membranes to their normal and healthy condition.

The law of *metastasis* of disease, also, the existence of which I discovered, and published, in 1859, will be there fully exhibited, in its workings, and in the multitudinous misunderstandings of these, by the general medical profession; while upon the teachings of such workings, will be based, in part, the principles for the treatment of phthisis pulmonalis, and its numerous diversified, but kindred maladies.

I will conclude with the single remark, that, while many of the most important features of my treatise will be found to rest solely upon abstract discoveries, which are purely my own, others, hardly less essential, are founded upon points of isolated discovery, made by others, but all which have remained disconnected, and of course, without fruit, until their connection and meaning were traced out and applied by me.



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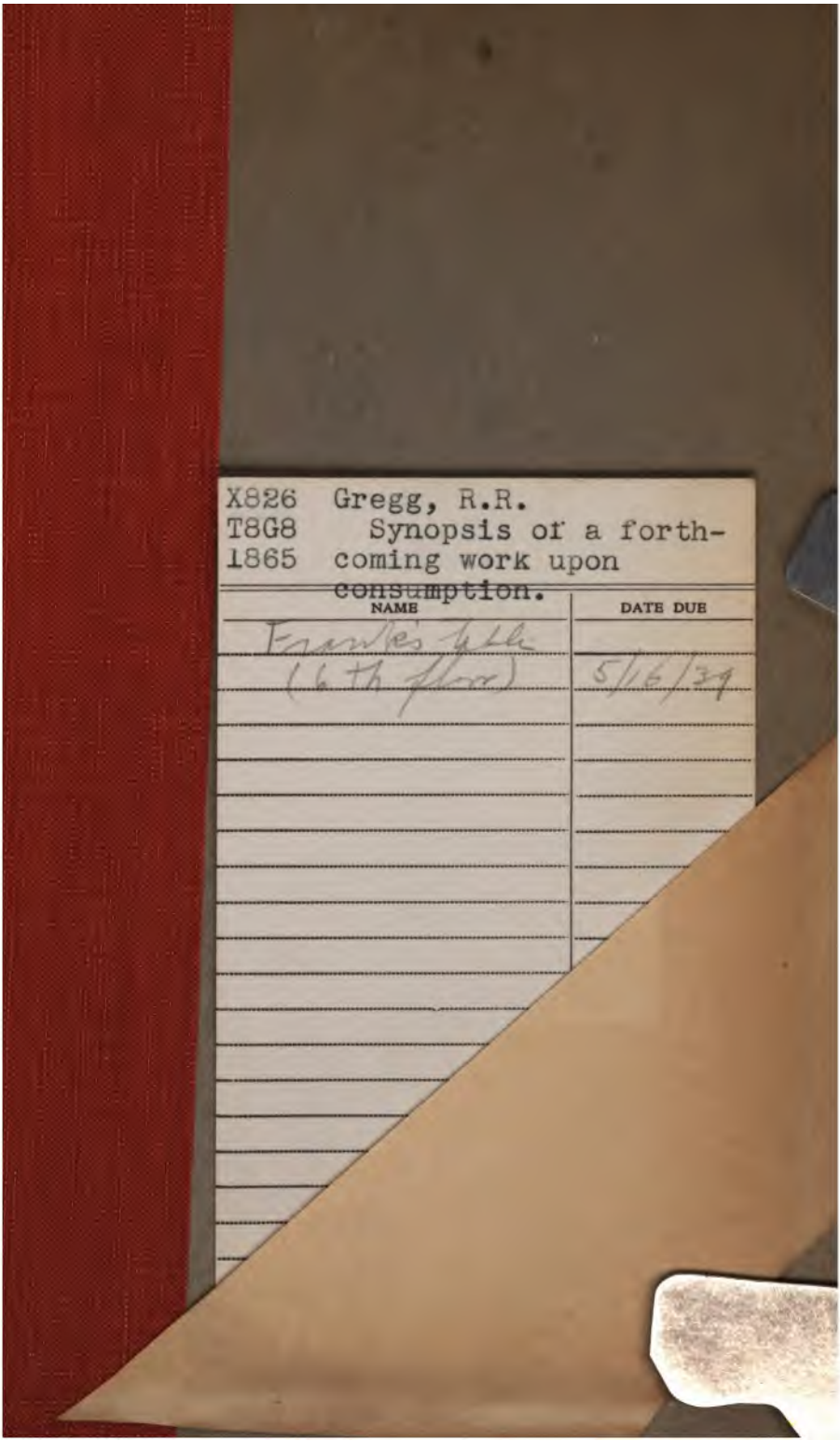

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